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A STRIKER

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(56) Prior Art Documents
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AU 52115/79 E05B 15/02 E05C 15/02
AU 37697/72 E05B 15/02

(57) Claim

1. A striker having an opening through which a main latch tongue can pass, and a tongue member which extends outwardly from the plane of the opening, or which can be caused to extend outwardly from the plane of the opening, to provide a contact surface along which an auxiliary latch tongue can ride to depress the auxiliary latch tongue into its lock body.

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AUSTRALIAPatents Act 1990COMPLETE SPECIFICATION
FOR A STANDARD PATENT

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The following statement is a full description of this invention,
including the best method of performing it known to us:

THIS INVENTION relates to a striker for a lock and particularly relates to a striker for use with locks having a main latch tongue and an auxiliary latch tongue which operates the main latch tongue.

5 Strikers or striking plates are provided on a door jamb to receive and retain the latch tongue from a door lock.

 The striker is provided with an opening through which the latch tongue can pass and the latch tongue is retained by the peripherheral wall of the striker which is
10 usually formed steel or other hard metal.

 Many door locks are provided with a single latch tongue which is biased to extend from the lock body. Upon closing of the door, the latch tongue contacts a curved or ramped leading portion on the striker and rides therealong to
15 push the latch tongue into the lock body. When the latch tongue reaches the opening in the striker, it passes therethrough and the door is latched. The latch tongue can then be locked or deadlocked to lock the door to the door jamb.

20 While the above arrangement is suitable for the above type of door lock, difficulties occur with a particular type of lock which is provided with a main latch tongue and a smaller auxiliary latch tongue. Such locks are the subject of many of our earlier patents.

25 An advantage with this type of lock is that the main latch tongue can extend further into the keeper than otherwise possible and therefore provides a more secure latching or locking of the door to the door jamb. This is achieved as the

main latch tongue is controlled by the auxiliary latch tongue. The auxiliary latch tongue holds the main latch tongue in a predominantly retracted position where the main latch tongue only slightly extends from the lock body.

5 When the door is closed, the auxiliary latch tongues contacts the striker and is pushed into the lock body and this action releases the main latch tongue which then shoots into the opening in the striker. The main latch tongue can be formed to extend further than otherwise possible.

10 This is because, if the lock was formed with only a single latch tongue which extended significantly from the lock body, this type of latch tongue tends to not ride smoothly along the striker when the door is closed but instead tends to abut against an edge of the striker. Thus, the door cannot be
15 pushed to a closed position. To overcome this, the main latch tongue could possibly be provided with an extremely large ramped edge to ride over the striker but this would severely
 reduce the strength of the latch tongue and would make it unsuitable for use in security locks.

20 One difficulty with the existing strikers for use with the above type of lock having a main latch tongue and an
 auxiliary latch tongue is that if the door is not precisely hung the gap between the door and the door jamb can be too large. This in turn results in incomplete contact between the
25 auxiliary latch tongue and the striker upon the door being closed and in extreme circumstances the auxiliary latch tongue may be insufficiently pushed into the lock body and therefore does not release the main latch tongue. The door is therefore

not automatically latched upon being pushed to a closed position. This of course is dangerous and results in a loss of security.

5 The applicant has now developed a striker which can be fitted to door jambs and which has a portion that can contact the auxiliary latch tongue to ensure that it is pushed far enough into the lock body upon closing of the door to result in the main latch tongue being released.

10 It is therefore an object of the invention to provide a striker which may overcome the abovementioned disadvantages or provide the public with a useful choice.

15 In one form, the invention resides in a striker having an opening through which a main latch tongue can pass, and a tongue member which extends outwardly from the plane of the opening, or which can be caused to extend outwardly from the plane of the opening, to provide a contact surface along which an auxiliary latch tongue can ride to depress the auxiliary latch tongue into its lock body.

20 The striker is suitably provided with an opening which is configured to complement the configuration of the main latch tongue. As most main latch tongues are rectangular in cross-section configuration, the opening is suitably rectangular when viewed in plan.

25 The tongue member is suitably positioned adjacent the opening. In an undeformed state, the tongue member suitably extends in the same plane as the opening.

The tongue member may form part of the periphery of the opening. Suitably, the tongue member forms part of the top and bottom edges of the opening.

A plurality of tongue members may be provided and it



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is preferred that a pair of tongue members are provided



extending adjacent upper and lower edges of the opening.

The striker may include a curved or ramped leading portion against which a latch tongue can ride to bias the latch tongue into its lock body.

5 The striker may include one or more apertures to accept fasteners thereby allowing the striker to be fastened to a door jamb.

10 An embodiment of the invention will now be illustrated with reference to the accompanying drawings in which

Figure 1 is a perspective view of a striker according to an embodiment of the invention;

Figure 2 is a side view of a lock and a striker with the tongue member extending in the plane of the opening;

15 Figure 3 is a view of the arrangement of Figure 2 where a tongue member is now deformed to extend from the plane of the opening.

Referring now to the figures, there is shown a striker 10 having an opening 11 to accommodate a main latch tongue 12 of a lock 13. Striker 10 is also provided with apertures 14 through which fasteners (not shown) can extend to fix the striker to a door jamb 15.

20 In the embodiment, striker 10 is also provided with a curved or ramped leading portion 16 which functions to push a latch tongue of a lock into the lock body upon contact of the latch tongue with striker 10.

25 Adjacent opening 11 and along upper and lower edges thereof are provided a pair of tongue members 17, 18. Each tongue member is integrally formed with the remainder of the striker and is attached the remaining portion of the striker

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adjacent a leading edge 19 of opening 11. Each tongue member 17, 18 extends rearwardly from the leading edge 19 and to a position closely spaced from trailing edge 20 of opening 11. Each tongue member 17, 18 includes an edge 21, 22 which defines upper and lower edges of opening 11.

Figure 2 shows the problem which can exist with locks 13 of the type having a main latch tongue 12 and an auxiliary latch tongue 23. This type of lock is well known and is arranged such that auxiliary latch tongue 23 controls main latch tongue 12. That is, auxiliary latch tongue 23 initially retains main latch tongue 12 in an only partially extended position as shown in Figure 2. Upon retraction of auxiliary latch tongue 23 into lock body 13 (as shown in Figure 3), main latch tongue 12 is released and is biased to extend fully into opening 11 (as shown in Figure 3).

If a door (not shown) to which lock 13 is fitted, is not hung properly, then the spacing "X" (see Figure 2, 3), between the door and the door jamb 15 is too large. This in turn has the result that auxiliary latch tongue 23 does not ride up against any portion of striker 10 and is therefore not retracted into lock body 13 to release main latch tongue 12.

If this difficulty is noticed during hanging of a door, then all that is necessary according to the invention is to push out a respective tongue member 17 (or 18) to a distance sufficient to ensure that auxiliary latch tongue 23 contacts and rides against tongue member 17 to ensure that auxiliary latch tongue 23 is retracted into lock body 13.

Typically, spacing "X" must be no more than 3 mm and therefore if this spacing is larger, a respective tongue member 17, 18 can then be deformed outwardly to ensure that

auxiliary latch tongue 23 is pushed into lock body 13 to a sufficient extent.

5 A pair of tongue members 17, 18 are suitably provided to provide maximum versatility to the striker. It can also be seen that the striker according to the invention can be used as a conventional striker by inclusion of the leading curved or ramped portion 16 therefore making such a striker also suitable for locks having a single latch tongue.

10 The striker can be formed from a single piece of metal and the tongue members 17, 18 can be stamped out of the metal.

15 It should be appreciated that various other changes and modifications may be made to the embodiment described without departing from the spirit and scope of the invention as claimed.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A striker having an opening through which a main latch tongue can pass, and a tongue member which extends outwardly from the plane of the opening, or which can be caused to extend outwardly from the plane of the opening, to provide a contact surface along which an auxiliary latch tongue can ride to depress the auxiliary latch tongue into its lock body.

2. The striker as claimed in claim 1, wherein the tongue member is positioned adjacent the opening.

3. The striker as claimed in claim 1, or claim 2, wherein the tongue member can be deformed from a position substantially in the plane of the opening to a position extending outwardly from the plane of the opening.

4. The striker as claimed in any one of the preceding claims, wherein the tongue member forms part of the periphery of the opening.

5. The striker as claimed in any one of the preceding claims, wherein a pair of tongue members are provided.

6. The striker as claimed in any one of the preceding claims, wherein the tongue member forms part of the top and/or bottom ends of the opening, in use.

7. The striker as claimed in any one of preceding claims, wherein the striker includes a curved or ramped leading portion against which a latch tongue can ride to bias the latch tongue into its lock body.

8. The striker as claimed in any one of the preceding claims wherein the or each tongue member is attached at one end to the remainder of the striker, and extends in a cantilever fashion to adjacent a rear edge of the opening.



9. A kit including a lock, and striker as claimed in any one of the preceding claims.

10. A striker substantially as hereinbefore described with reference to the accompanying drawings.

5 DATED this Nineteenth day of December 1994.

WHITCO PTY LTD

By Their Patent Attorneys

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ABSTRACT

A striker for a lock is provided. The striker 10 includes a pair of deformable tongue members 17, 18 which can be pressed out of the plane of the striker to provide a ramp against which an auxiliary latch tongue of a lock can pass.

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Fig. 1.

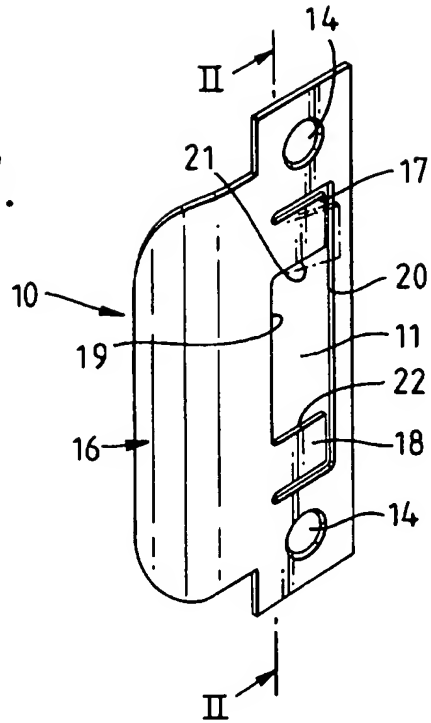


Fig. 2.

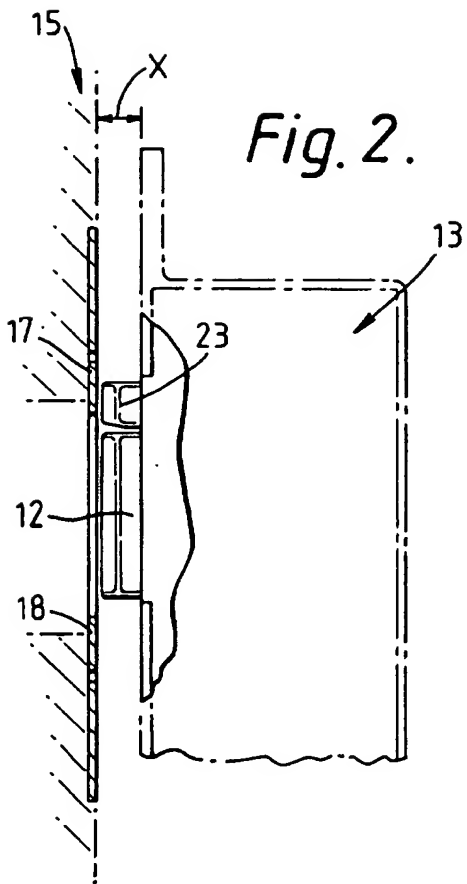
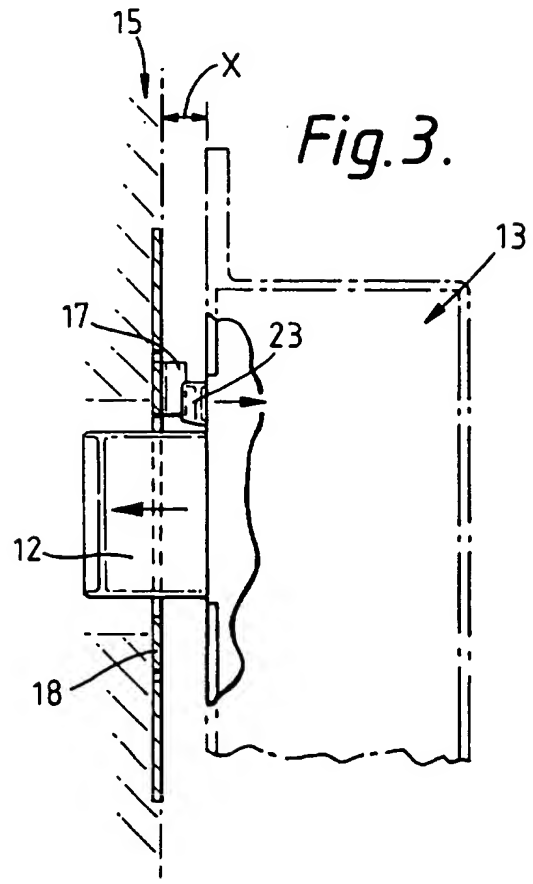


Fig. 3.



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